

### REMARKS

Claims 1-25 are pending. Claims 1-25 are rejected. The specification has been amended. Claim 9 has been amended. No new matter has been added.

#### Objections to the Specification

The specification was objected to because of informalities appearing on page 12. These informalities have been corrected. Applicant respectfully requests that this objection be withdrawn.

#### Objections to the Claims

Claim 9 was objected to because of informalities appearing in the language of the Claim. These informalities have been corrected. Applicant respectfully requests that this objection be withdrawn.

#### 35 U.S.C. 102(e) Rejections

Claims 1, 7-9, 16-19, and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al., U.S. Patent Application No. 2002/0116527 A1.

The Examiner is respectfully directed to independent Claim 1, which recites that an embodiment of the present invention is directed to:

A method for performing a parallel hash transformation in a network device to generate a hash pointer for an address input, comprising:  
    receiving an address input;  
    apportioning the address input among a plurality of hashing units;  
    executing a hash transformation on the apportioned address inputs in parallel, resulting in a corresponding plurality of hashing unit outputs; and  
    combining the hashing unit outputs to generate a hash result corresponding to the address input.

Claims 9 and 19 recite similar limitations. Claims 7 and 8 are dependent upon Claim 1, and recite further features of the claimed invention. Claims 16-18 are dependent upon Claim 9, and recite further features of the claimed invention. Claims 21-23 are dependent upon Claim 19, and recite further features of the claimed invention.

The rejection suggests that Chen discloses every element of the present invention. Applicant respectfully disagrees. Chen fails to teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. The portion of Chen cited to show this element describes, first, the generation of four hash keys (see para. 50-51), and then describes selecting sequentially between these keys until an empty entry in a flow table referenced by one of these four keys is found. No where in the cited text does Chen teach or suggest combining the output of hashing units to generate a hash result corresponding to the address input, as claimed. Therefore, Applicant asserts that Chen fails to anticipate or render obvious the embodiments of the present invention recited in Claims 1, 9, and 19.

Moreover, the rejection does not show that the elements of Chen are arranged as required by Claims 1, 9, and 19, as is necessary to establish grounds for rejection under 35 U.S.C. 102 (see MPEP § 2131). For example, the rejection alleges that Chen receives an address input, as claimed, at paragraph 5. The rejection further alleges that this address input is apportioned among a plurality of hashing units, as claimed, also at paragraph 5. The rejection then alleges that Chen executes a hash transformation on the apportioned address inputs in parallel, resulting in a corresponding plurality of hashing unit outputs, as claimed, at paragraphs 48-49.

However, the input to the process described in paragraphs 48 and 49 is *not* described as being the address input described at paragraph 5, nor is the "plurality of shift control logic" described as being the same as the "N different hardware hash functions" of paragraph 5. Accordingly, the rejection fails to set forth a *prima facie* case for rejection under 35 U.S.C. 102(e).

Therefore, Applicant respectfully asserts that Claims 1, 9, and 19 overcome the grounds for rejection under 35 U.S.C. 102(e), and are in condition for allowance. Accordingly, Claims 7 and 8, dependent upon Claim 1, Claims 16-18, dependent upon Claim 9, and Claims 21-23, dependent upon Claim 19, overcome the basis for rejection under 35 U.S.C. 102(e), as they are dependent on allowable base claims.

#### 35 U.S.C. 103(a) Rejections

Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being obvious over Chen, in view of Donoghue et al., U.S. Patent App. No. 2003/0117944.

The Examiner is respectfully directed to independent Claim 1, reproduced above. Claims 2 and 10 are dependent on Claim 1, and recite further features of the claimed embodiments.

As set forth previously, Applicant asserts that Chen fails to teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Donoghue fails to remedy this defect in Chen, as Donoghue does not teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Therefore, Chen, alone or

in combination with Donoghue, fails to anticipate or render obvious the embodiments of the present invention recited in Claims 2 and 10.

Claim 4 is rejected under 35 U.S.C. 103(a) as being obvious over Chen, in view of Hunter et al., U.S. Patent App. No. 2002/0059197 A1.

The Examiner is respectfully directed to independent Claim 1, reproduced above. Claim 4 is dependent on Claim 1, and recites further features of the claimed embodiments.

As set forth previously, Applicant asserts that Chen fails to teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Hunter fails to remedy this defect in Chen, as Hunter does not teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Therefore, Chen, alone or in combination with Hunter, fails to anticipate or render obvious the embodiments of the present invention recited in Claim 4.

Claims 6, 14, 15, 20, 24, and 25 are rejected under 35 U.S.C. 103(a) as being obvious over Chen, in view of Goldberg et al., U.S. Patent App. No. 2004/0013112 A1.

The Examiner is respectfully directed to independent Claim 1, reproduced above. Independent Claims 9, 19, and 24 recite similar limitations. Claim 6 is dependent on Claim 1, and recites further features of the claimed embodiments.

Claims 14 and 15 are dependent on Claim 9, and recite further features of the claimed embodiments. Claim 20 is dependent on Claim 19, and recites further features of the claimed embodiments. Claim 25 is dependent on Claim 24, and recites further features of the claimed embodiments.

As set forth previously, Applicant asserts that Chen fails to teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Goldberg fails to remedy this defect in Chen, as Goldberg does not teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Therefore, Chen, alone or in combination with Goldberg, fails to anticipate or render obvious the embodiments of the present invention recited in Claims 6, 14, 15, 20, 24, and 25.

Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being obvious over Chen, in view of Donoghue, further in view of Glaise et al., U.S. Patent. No. 6,097,725.

The Examiner is respectfully directed to independent Claim 1, reproduced above. Independent Claim 9 recites similar limitations. Claim 3 is dependent on Claim 1, and recites further features of the claimed embodiments. Claim 11 is dependent on Claim 9, and recites further features of the claimed embodiments.

As set forth previously, Applicant asserts that Chen, alone or in combination with Donoghue, fails to teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Glaise fails to

remedy this defect, as Glaise does not teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Therefore, Chen, alone or in combination with Donoghue and Glaise, fails to anticipate or render obvious the embodiments of the present invention recited in Claims 3 and 11.

Claim 5 is rejected under 35 U.S.C. 103(a) as being obvious over Chen, in view of Hunter, further in view of Melvin, U.S. Patent. No. 6,804,767.

The Examiner is respectfully directed to independent Claim 1, reproduced above. Claim 5 is dependent on Claim 1, and recites further features of the claimed embodiments.

As set forth previously, Applicant asserts that Chen, alone or in combination with Hunter, fails to teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Melvin fails to remedy this defect, as Melvin does not teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Therefore, Chen, alone or in combination with Hunter and Melvin, fails to anticipate or render obvious the embodiments of the present invention recited in Claim 5.

Claim 12 is rejected under 35 U.S.C. 103(a) as being obvious over Chen, in view of Donoghue, further in view of Hunter.

The Examiner is respectfully directed to independent Claim 1, reproduced above. Independent Claim 9 recites similar limitations. Claim 12 is dependent on Claim 9, and recites further features of the claimed embodiments.

As set forth previously, Applicant asserts that Chen, alone or in combination with Donoghue, fails to teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Hunter fails to remedy this defect, as Hunter does not teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Therefore, Chen, alone or in combination with Donoghue and Hunter, fails to anticipate or render obvious the embodiments of the present invention recited in Claim 12.

Claim 13 is rejected under 35 U.S.C. 103(a) as being obvious over Chen, in view of Donoghue, further in view of Hunter, further in view of Melvin.

The Examiner is respectfully directed to independent Claim 1, reproduced above. Independent Claim 9 recites similar limitations. Claim 13 is dependent on Claim 9, and recites further features of the claimed embodiments.

As set forth previously, Applicant asserts that Chen, alone or in combination with Donoghue and Hunter, fails to teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input, as claimed. Melvin fails to remedy this defect, as Melvin does not teach or describe combining the hashing unit outputs to generate a hash result corresponding to the address input,

as claimed. Therefore, Chen, alone or in combination with Donoghue, Hunter, and Melvin, fails to anticipate or render obvious the embodiments of the present invention recited in Claim 13.



Conclusion


In light of the above-listed amendments and remarks, Applicants respectfully request allowance of the remaining Claims.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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Date: 3/16, 2006

  
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